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Application Number	09/841,862
Filing Date	April 25, 2001
First Named Inventor	R. A. Wiedeman
Art Unit	2665
Examiner Name	Daniel J. Ryman
Attorney Docket Number	YR0-25

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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Karambelas & Associates		
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Date	October 11, 2005	Reg. No.	25,657

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PATENT
YR0-25

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appeal No._____

In re Application of: ROBERT A. WIEDEMAN ET AL
Serial No.: 09/841,862
Filed: April 25, 2001
For: USER TERMINAL EMPLOYING QUALITY OF SERVICE PATH DETERMINATION AND BANDWIDTH SAVING MODE FOR A SATELLITE ISP SYSTEM USING NON-GEOSYNCHRONOUS ORBIT SATELLITES

APPELLANTS' REPLY BRIEF

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: R. A. WIEDEMAN ET AL	:	Date: October 11, 2005
Serial No.: 09/841,862	:	
Filed: April 25, 2001	:	Group Art Unit: 2665
For: USER TERMINAL EMPLOYING QUALITY OF SERVICE PATH DETERMINATION AND BANDWIDTH SAVING MODE FOR A SATELLITE ISP SYSTEM USING NON-GEOSYNCHRONOUS ORBIT SATELLITES	:	Examiner: Daniel J. Ryman

APPELLANTS' REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is in response to the Examiner's Answer of August 23, 2005. This brief is submitted in accordance with the provisions of 37 CFR §41.41.

ARGUMENT

Respondents maintain their position with regard to claims 1 and 14 on pages 5-6 of Respondents' Brief that "it is not at all clear from the recited passages relied upon by the Examiner that a mobile station and a user terminal are equivalent since they are not stated to be therein and there is no indication as used in the reference that they are."

The Examiner states that during patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification, citing MPEP § 2111 (citing to *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000)). This means that the words of the claim must be given their plain meaning unless [appellant] has provided a clear definition in specification. MPEP § 2111.01 (citing to *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)). Since Appellants have not specifically defined "user terminal" in the specification, Examiner is required to give "user terminal" its broadest reasonable interpretation consistent with the specification by employing the "plain meaning" of the

phrase. Here, Examiner has interpreted "user terminal" to be any device employed by an individual to connect to a network.

Respondents respectfully submit that the Examiner's reasoning and interpretation of Figs. 1, 2 and col. 2, lines 15-23, that various applications run on the inventive "mobile station", citing col. 6, lines 48-49, including voice, data, and multimedia applications, citing col. 5, lines 22-26, teachings relating to voice, data, and multimedia applications of mobile networks, citing col. 2, lines 3-9, do not in any way support the Examiner's assertion that Forslow discloses a user terminal or that, at the very least, strongly suggests that a mobile device is employed by a user to connect to the network. Respondents respectfully submit that one of ordinary skill in the satellite telecommunications art, unlike that of the terrestrial data communications art of Forslow, would understand and employ the term "user terminal" and not "mobile station" nor would one of ordinary skill in the satellite communications art be acquainted with such a term as "mobile station".

Respondents maintain their position as taken on pages 5-6 of their Brief that Forslow "neither suggests, teaches or implies a gateway which is bidirectionally coupled to a data communication network as required in the instant claims, nor is there an explicit teaching of one gateway bidirectionally coupled to a data communication network as required, for example, in element three of claim 1."

Respondents respectfully submit that Forslow's disclosure directed to a mapper for mapping individual application flows to one of the circuit-switched network and the packet-switched network bearers, as outlined and relied upon by the Examiner at col. 6, lines 60-64, does not in any way suggest a gateway such as, for example, defined in assignee's preferable gateway depiction in Fig. 2B of U. S. Patent No. 6,804,514 which is premised on previously disclosed and understood gateway depictions by those of ordinary skill in the art. Respondents respectfully submit that the Examiner's assertions premised on col. 6, lines 60-64 which suggest that "the gateway is connected in some fashion" to the packet-switched network in order to permit the gateway to map flows to the packet-switched network and his assertion that Forslow discloses that the gateway "include a mapper for mapping individual application flows to one of the circuit-switched network and packet-switched network bearers" does not in any way cure this deficiency nor contemplate a gateway as employed in the instant claims. Respondents respectfully submit that the GGSN as defined in col. 10, lines 42-45 and Figs. 1 and 2 in Forslow which show a GGSN connected to a packet-switched network do little to cure this deficiency.

Respondents respectfully submit that at col. 6, lines 60-64 it is clearly stated that "the mobile station and a mobile network gateway node each include a mapper for

"mapping individual application flows to one of the circuit-switched network and the packet-switched network bearers depending on the quality of service requested for an individual application flow." Respondents respectfully submit that the mobile station previously equated by the Examiner to a user terminal does not include a mapper for mapping, as recited above, and the gateway as defined by the instant claims is totally non-analogous and distinct from the terrestrial gateway as described in Forslow and does not in any way contain a mobile station and a mobile network gateway node including a mapper as recited by the Examiner. Respondents respectfully submit that the Examiner's assertions that the gateway is connected in some fashion and that the gateway is a GGSN supported by col. 10, lines 42-45 and Figs. 1 and 2 do little to cure this deficiency.

Furthermore, Respondents respectfully maintain their position that the Examiner has failed to show a bidirectional gateway as defined above and in the instant claims. The Examiner's assertion that a gateway of the type described in Forslow, which would include types of flows that require bidirectional communication such as voice communication and surfing on the world-wide web, supported by col. 5, lines 37-51, does not in any way support the teaching of the bidirectional gateway as employed in the claims of the instant invention. Furthermore, the Examiner's contention that Respondents have only supported their position with respect to Forslow, distinguishing over col. 5, lines 37-41, which the Examiner states to be the prior art transfer technology and not the entire cited portion of col. 5, lines 37-51, is in error. Respondents respectfully submit that in col. 5, lines 37-51, as the Examiner has set out, there is a discussion of the Forslow invention relating to a mobile communications network transfer service – a circuit-switched transfer service or a packet-switched transfer service – which is specified on an individual application flow basis. Respondents respectfully submit this has been amply discussed and distinguished elsewhere in the Brief and does little to cure the failure to support the teaching of a bidirectional gateway. Furthermore, Respondents respectfully submit that the characterization by the Examiner of Respondents' recitation of col. 5, lines 37-51 embracing a broad ranging discussion of a network technology transferring data only according to one type of transfer mechanism either circuit-switched or packet-switched does not require any reasoning with regard to precluding a bidirectional gateway since the entire teaching is devoid of any suggestion or implication or a bidirectional gateway.

Respondents maintain their position as outlined in pages 5-6 of the Brief "what is clearly described are applications running on a mobile station or on an external network entity such as an Internet service provider specifying a quality of service, not a

"user terminal comprising a controller responsive to applications for selecting individual ones of a plurality of quality of service modes for servicing different application requirements as required by the fourth element of claim 1."

Respondents respectfully submit that the Examiner's support for his disagreement with respect to this position at col. 6, lines 60-64 and col. 14, lines 51-54 do not teach, suggest or imply a controller but a mapper which controls the allocation of application flows to one of the circuit-switched network and the packet-switched network bearers. Respondents respectfully submit this is not equivalent to a controller as a user terminal is not equivalent to a mobile station as service modes comprising packet-switched or circuit-switched are not equivalent to quality of service modes as contended by the Examiner.

Respondents respectfully maintain their positions on pages 7-8 of the Brief stating there is neither any suggestion, implication or teaching that Forslow, devoid of any mobile satellite telecommunication disclosure, may be combined with Roccanova which is directed to a method for discriminating and routing data packets in a satellite-based communication system which is not anywhere taught to be mobile in order to reject Respondents' instant claims.

The Examiner's recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and states that here, Forslow teaches that "the present invention can be implemented in any mobile communication system using other mobile data communications architectures and/or protocols" (col. 8, lines 60-63), and Roccanova teaches that "[d]iscriminating and routing data packets based on QoS requirements is of particular importance in satellite-based communication system where orbital designs must accommodate the need for short round trip times required for voice data" (col. 1, lines 31-36), and Roccanova also discloses a mobile terminal (col. 3, lines 6-11), and, therefore, Forslow teaches that Forslow's invention can be implemented in any other mobile communication system, where Roccanova discloses a mobile communication system employing a satellite sub-system. The Examiner continues that in addition, Roccanova discloses that QoS routing is important in satellite systems where Forslow discloses a method for QoS routing. As such, the Examiner maintains that Forslow and Roccanova are properly combinable.

Respondents respectfully contend that the determination set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966) to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention has not been satisfied. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

According to these cases, these showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. It is Respondents' position that this burden has not been made and that a prima facie case of obviousness has not been presented since the claim limitations are not taught or suggested by Forslow in combination with Roccanova. This is especially true since Respondents respectfully submit that Forslow, directed to terrestrial communication as recited above, may not be properly combined with Roccanova for the reasons stated in the Brief and above which are hereby respectfully incorporated by reference.

Furthermore, Respondents respectfully submit that Roccanova no where teaches, suggests or implies a mobile satellite telecommunication system and Forslow clearly does not disclose a controller responsive to applications for selecting individual ones of a plurality of quality of service modes for servicing different application requirements, illustrating that a prima facie case of obviousness has not been made.

Respondents respectfully maintain their position on pages 7-8 that "Roccanova is not concerned nor does it disclose, for example, at least one user terminal or a gateway bidirectionally coupled to a data communications network in combination with a controller responsive to applications for selecting individual ones of a plurality of quality of service modes for servicing different application requirements as required in claim 1." Although Respondents respectfully acknowledge the Examiner's position with regard to attacking the references individually where the rejections are based on combination of references, citing *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986), Respondents respectfully contend that they have successfully disputed and distinguished over Forslow: that Forslow discloses at least one user terminal as defined in the claims; that there is a bidirectional gateway as in the instant claims; that there is a controller as defined in the instant claims; and inter alia that there is a quality

of service mode for servicing different application requirements as required in the instant claims. Accordingly, Respondents respectfully submit that the Examiner has failed to make out a prima facie case of obviousness and respectfully disagree that the combination of Forslow and Roccanova discloses the above limitations regardless of whether or not Roccanova individually teaches these features.

Respondents note that the Examiner has changed his position as set out in the Final Rejection mailed April 18, 2005 as recited in paragraph 7 of same that Roccanova does not disclose "at least one user terminal or a gateway bidirectionally coupled to a data communications network in combination with a controller responsive to applications for selecting individual ones of a plurality of quality of service modes for servicing different application requirements." Respondents respectfully submit that the Examiner was correct in the first instance and not supported in the second instance since at ref. 12, col. 3, lines 6-11, relating to a transmitting device comprised of a portable computing device comprising a cellular telephone handset employing wireless RF based communication channels to communicate with a network; ref. 14, col. 3, lines 6-23, further relating to the network routing device receiving transmitted data stream from a transmitting device routing it to an appropriate satellite communication system; and col. 4, lines 1-42, relating to two or more applications residing on a transmitting device where a first application may support an Internet phone call that transmits and receives voice over IP....Depending on the application providing the input data stream either a first spread spectrum code which may correspond to QoS data streams and is used to generate the spread spectrum data stream or a second spread spectrum code which may correspond to non-QoS data streams is used to generate the spread spectrum data stream, does not in any way cure the above-noted deficiencies.

Therefore, Respondents respectfully contend that the combination of Forslow and Roccanova does not teach, suggest or imply a QoS system in combination with a satellite-based communication system such that the limitations of claims 1 and 14 are obvious in view of the combination of said references.

Regarding claims 2 and 15, on pages 8-9 of the Brief, Respondents respectfully maintain that the prior art fails to teach, suggest or imply "that the user terminal operates to communicate a request for a selected one of said QoS modes at least to said gateway." Respondents respectfully submit that nothing at col. 6, lines 3-15 nor col. 11, lines 3-55 of Forslow relating to a GGSN nor at col. 20, lines 33-41 teach, suggest or imply "that the user terminal operates to communicate a request for a selected one of said QoS modes at least to said gateway." Furthermore, Forslow, directed to terrestrial communications and not satellite communications, does not by

reciting type of connection requested indicate QoS requirements for the session. Furthermore, Respondents respectfully submit that the Examiner's contention that the mobile station must transmit some indication of the QoS mode relating to type of communication be established does not teach, suggest or imply a plurality of quality of service (QoS) modes for servicing different application requirements as recited in the instant claims.

Respondents respectfully submit that nothing in col. 2, lines 9-27 of Roccanova, setting out the summary of the invention and including "(b) selecting either a first spread spectrum code or a second spread spectrum code based on the quality of service (QoS) requirements associated with the first application;" supports the Examiner's contention of Forslow teaching communicating the QoS requirements for a connection a gateway which Respondents have specifically disputed as being taught in a mobile communication system in order to properly allocate resources for a connection between a user terminal, again disputed by Respondents, and the gateway, Roccanova teaches that it is also important to communicate the QoS, again disputed by Respondents, requirements to a gateway in a satellite communication system in order to properly allocate resources for a connection through the satellite system.

Accordingly, Respondents maintain that the limitations of claims 2 and 15 are not to be found nor are they rendered obvious in either of Forslow or Roccanova or in any combination thereof, however improperly combined.

Respondents maintain their position with regard to claims 3 and 16 on page 9 of the Brief, to wit "charging is provided depending on the amount of data actually transmitted and on the quality of service of that transmission as opposed to a greater amount for the use of a QoS of higher quality as required by claim 3 alone." Respondents respectfully submit that nothing in col. 1, lines 60-62 of Forslow relating to charging depending on the amount of data actually transmitted and on the quality of services of that transmission, nor the Examiner's reasoning and suppositions, in addition to the disclosure at col. 1, lines 41-62, cure this deficiency.

Regarding claims 4 and 17, on pages 9-10 of the Brief, Respondents maintain their assertion that Forslow does not disclose a highest quality of service mode, a medium quality of service mode, a best available quality of service mode, and a guaranteed data rate packet data service mode, but that Forslow does disclose three classes of QoS data service, namely, deterministic, statistical, and best effort.

Respondents respectfully submit they have carefully read the Examiner's reasoning with regard to the IEEE definition of "deterministic", the Examiner's characterization of "statistical", "best effort", and "packet switched bearer" or "circuit

"switched bearer" and respectfully submit that "highest quality of service mode, a medium quality of service mode, a best available quality of service mode, and a guaranteed data rate packet data service mode" do not in any way equate to QoS data service, namely deterministic, statistical, and best effort as contended by the Examiner.

Regarding claims 5 and 18, on pages 10-11 of the Brief, Respondents respectfully maintain their position that the prior art does not disclose "that the controller selects one of a circuit switched or a packet switched mode of operation." Respondents respectfully disagree that there is any equivalence taught in the art between a controller and a mapper that selects one of a circuit switched or packet switched mode of operation as seen in Forslow, col. 5, lines 41-51 and col. 6, lines 48-64.

Furthermore, with regard to claims 6, 7, 19 and 20, on pages 12-14 of the Brief, Respondents maintain their position that Forslow does not teach, suggest or imply "a processor responsive at least to stored information for selecting a path through said network to a destination gateway for routing communication to or from said data communication network and said user terminal." Respondents respectfully submit that nothing in col. 6, lines 7-10 of Forslow nor the Examiner's reasoning with regard to a reserved path and information stored teaches, suggests or implies a processor responsive at least to stored information for selecting a path through said network to a destination gateway for routing communication to or from said data communication network and said user terminal.

Respondents respectfully maintain their position that Forslow does not teach, suggest or imply satellite ephemeris information or even a constellation of satellites and that Roccanova does not teach, suggest or imply stored satellite ephemeris information for selecting a path through said satellite constellation to a destination gateway.

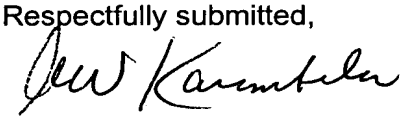
Respondents respectfully submit that the Examiner's reliance on Wiedeman is inappropriate since there is no suggestion to combine nor any motivation to do so found in either Forslow, Roccanova or Wiedeman. Furthermore, as previously recited by Respondents, Wiedeman does not teach using stored satellite ephemeris information for selecting a path through said satellite constellation to a destination gateway. Nothing in col. 3, lines 12-26 of Wiedeman, nor the IEEE Standards definition of "ephemeris" cure this deficiency.

For the foregoing reasons, Respondents maintain that the limitations of claims 6, 7, 19 and 20 have been shown to be patentably distinguishable over Forslow, Roccanova and Wiedeman.

As previously recited, Respondents respectfully contend that they have successfully disputed and distinguished over Forslow: that Forslow discloses at least one user terminal as defined in the claims; that there is a bidirectional gateway as in the instant claims; that there is a controller as defined in the instant claims; and inter alia that there is a quality of service mode for servicing different application requirements as required in the instant claims. Accordingly, Respondents respectfully submit that the Examiner has failed to make out a prima facie case of obviousness and respectfully disagree that the combination of Forslow and Roccanova discloses the above limitations regardless of whether or not Roccanova individually teaches these features.

Respondents respectfully submit for the reasons cited above rejections of the primary Examiner should be reversed and that this application be allowed to go to issue.

Respectfully submitted,



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